

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.**

Application Serial Number: 10/591, 159
Source: IFWP
Date Processed by STIC: 09/12/2006

ENTERED



IFWP

RAW SEQUENCE LISTING

DATE: 09/12/2006

PATENT APPLICATION: US/10/591,159

TIME: 11:29:32

Input Set : A:\2006-1322A - Sequence Listing.txt

Output Set: N:\CRF4\09122006\J591159.raw

3 <110> APPLICANT: Covalys Biosciences AG
 5 <120> TITLE OF INVENTION: Mutants of O6-Alkylguanine-DNA Alkyltransferase
 7 <130> FILE REFERENCE: P318A
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/591,159
 C--> 9 <141> CURRENT FILING DATE: 2006-08-30
 9 <150> PRIOR APPLICATION NUMBER: EP04405123.3
 10 <151> PRIOR FILING DATE: 2004-03-02
 12 <150> PRIOR APPLICATION NUMBER: EP04405465.8
 13 <151> PRIOR FILING DATE: 2004-07-22
 15 <160> NUMBER OF SEQ ID NOS: 48
 17 <170> SOFTWARE: PatentIn version 3.3
 19 <210> SEQ ID NO: 1
 20 <211> LENGTH: 624
 21 <212> TYPE: DNA
 22 <213> ORGANISM: Homo sapiens
 24 <400> SEQUENCE: 1
 25 atggacaagg attgtgaaat gaaacgcacc aactggaca gccctttggg gaagctggag 60
 27 ctgtctggtt gtgagcaggg tctgcacgaa ataaagctcc tgggcaaggg gacgtctgca 120
 29 gctgatgccg tggaggtccc agcccccgct gcggttctcg gaggtccgga gccctgatg 180
 31 cagtgcacag cctggctgaa tgcctatttc caccagcccg aggctatcga agagttcccc 240
 33 gtgccggcac ttcaccatcc cgttttccag caagagtcgt tcaccagaca ggtgttatgg 300
 35 aagctgctga aggttgtgaa attcggagaa gtgatttctt accagcaatt agcagccctg 360
 37 gcaggcaacc ccaaagccgc gcgagcagtg ggaggagcaa tgagaggcaa tcctgtcccc 420
 39 atcctcatcc cgtgccacag agtggctctgc agcagcggag ccgtgggcaa ctactccgga 480
 41 ggactggccg tgaaggaatg gcttctggcc catgaaggcc accggttggg gaagccaggc 540
 43 ttgggagggg gctcaggtct ggcaggggcc tggctcaagg gagcgggagc tacctcgggc 600
 45 tccccgcctg ctggccgaaa ctga 624
 48 <210> SEQ ID NO: 2
 49 <211> LENGTH: 22
 50 <212> TYPE: DNA
 51 <213> ORGANISM: Artificial Sequence
 53 <220> FEATURE:
 54 <223> OTHER INFORMATION: Substrate oligonucleotide containing O6-Benzylguanine at
 position
 55 14
 58 <220> FEATURE:
 59 <221> NAME/KEY: misc_feature
 60 <222> LOCATION: (14)..(14)
 61 <223> OTHER INFORMATION: n is O6-benzylguanine
 63 <400> SEQUENCE: 2
 W--> 64 gtggtgggca gctnaggcgt gg 22
 67 <210> SEQ ID NO: 3
 68 <211> LENGTH: 33
 69 <212> TYPE: DNA

CP9-6)

RAW SEQUENCE LISTING

DATE: 09/12/2006

PATENT APPLICATION: US/10/591,159

TIME: 11:29:32

Input Set : A:\2006-1322A - Sequence Listing.txt

Output Set: N:\CRF4\09122006\J591159.raw

```

70 <213> ORGANISM: Artificial Sequence
72 <220> FEATURE:
73 <223> OTHER INFORMATION: Sense primer for cloning AGT into pGEX
75 <400> SEQUENCE: 3
76 cgaaatggat ccatggacaa ggattgtgaa atg                                     33
79 <210> SEQ ID NO: 4
80 <211> LENGTH: 43
81 <212> TYPE: DNA
82 <213> ORGANISM: Artificial Sequence
84 <220> FEATURE:
85 <223> OTHER INFORMATION: Antisense primer for cloning AGT into pGEX
87 <400> SEQUENCE: 4
88 gcctttgaat tccgtctttg tagtcgtttc ggccagcagg cgg                             43
91 <210> SEQ ID NO: 5
92 <211> LENGTH: 31
93 <212> TYPE: DNA
94 <213> ORGANISM: Artificial Sequence
96 <220> FEATURE:
97 <223> OTHER INFORMATION: Sense primer for mutating K125A, T127A, R128A
99 <400> SEQUENCE: 5
100 gcaacccgc agccacggca gcagtgggag g                                         31
103 <210> SEQ ID NO: 6
104 <211> LENGTH: 31
105 <212> TYPE: DNA
106 <213> ORGANISM: Artificial Sequence
108 <220> FEATURE:
109 <223> OTHER INFORMATION: Antisense primer for mutating K125A, T127A, R128A
111 <400> SEQUENCE: 6
112 cctccactg ctgccgtggc tgcgggggttg c                                         31
115 <210> SEQ ID NO: 7
116 <211> LENGTH: 49
117 <212> TYPE: DNA
118 <213> ORGANISM: Artificial Sequence
120 <220> FEATURE:
121 <223> OTHER INFORMATION: Sense primer for cloning into eukaryotic pNUC vector
123 <400> SEQUENCE: 7
124 gatcgagcta gcgctaccgg tcgccaccat ggacaaggat tgtgaaatg                     49
127 <210> SEQ ID NO: 8
128 <211> LENGTH: 31
129 <212> TYPE: DNA
130 <213> ORGANISM: Artificial Sequence
132 <220> FEATURE:
133 <223> OTHER INFORMATION: Antisense primer for cloning into eukaryotic pNUC vector
135 <400> SEQUENCE: 8
136 gctagggatc ctacgtttcg gccagcaggc g                                         31
139 <210> SEQ ID NO: 9
140 <211> LENGTH: 35
141 <212> TYPE: DNA
142 <213> ORGANISM: Artificial Sequence

```

RAW SEQUENCE LISTING

DATE: 09/12/2006

PATENT APPLICATION: US/10/591,159

TIME: 11:29:32

Input Set : A:\2006-1322A - Sequence Listing.txt

Output Set: N:\CRF4\09122006\J591159.raw

```

144 <220> FEATURE:
145 <223> OTHER INFORMATION: Sense primer for mutating Cys 62 to Ala
147 <400> SEQUENCE: 9
148 gagccctga tgcaggctac agcctggctg aatgc 35
151 <210> SEQ ID NO: 10
152 <211> LENGTH: 35
153 <212> TYPE: DNA
154 <213> ORGANISM: Artificial Sequence
156 <220> FEATURE:
157 <223> OTHER INFORMATION: Antisense primer for mutating Cys 62 to Ala
159 <400> SEQUENCE: 10
160 gcattcagcc aggctgtagc ctgcatcagg ggctc 35
163 <210> SEQ ID NO: 11
164 <211> LENGTH: 60
165 <212> TYPE: DNA
166 <213> ORGANISM: Artificial Sequence
168 <220> FEATURE:
169 <223> OTHER INFORMATION: Sense primer for cloning of AGT mutants into phage-display
vector
171 <400> SEQUENCE: 11
172 ctactcgcgg cccagccggc catggcggac tacaaagaca tggacaagga ttgtgaaatg 60
175 <210> SEQ ID NO: 12
176 <211> LENGTH: 40
177 <212> TYPE: DNA
178 <213> ORGANISM: Artificial Sequence
180 <220> FEATURE:
181 <223> OTHER INFORMATION: Antisense primer for cloning of AGT mutants into phage-
display
182 vector
184 <400> SEQUENCE: 12
185 ggaattcggc ccccgaggcc gcgtttcggc cagcaggcgg 40
188 <210> SEQ ID NO: 13
189 <211> LENGTH: 42
190 <212> TYPE: DNA
191 <213> ORGANISM: Artificial Sequence
193 <220> FEATURE:
194 <223> OTHER INFORMATION: Antisense primer for cloning AGT truncated after 182 into
pGEX
196 <400> SEQUENCE: 13
197 gcctttgaat tccgtctttg tagtctccca agcctggctt cc 42
200 <210> SEQ ID NO: 14
201 <211> LENGTH: 50
202 <212> TYPE: DNA
203 <213> ORGANISM: Artificial Sequence
205 <220> FEATURE:
206 <223> OTHER INFORMATION: Sense primer for randomisation of codons 131-135
209 <220> FEATURE:
210 <221> NAME/KEY: misc_feature
211 <222> LOCATION: (22)..(23)
212 <223> OTHER INFORMATION: n is a, c, g, or t
214 <220> FEATURE:
215 <221> NAME/KEY: misc_feature

```

RAW SEQUENCE LISTING

DATE: 09/12/2006

PATENT APPLICATION: US/10/591,159

TIME: 11:29:32

Input Set : A:\2006-1322A - Sequence Listing.txt

Output Set: N:\CRF4\09122006\J591159.raw

```

216 <222> LOCATION: (25)..(26)
217 <223> OTHER INFORMATION: n is a, c, g, or t
219 <220> FEATURE:
220 <221> NAME/KEY: misc_feature
221 <222> LOCATION: (31)..(32)
222 <223> OTHER INFORMATION: n is a, c, g, or t
224 <220> FEATURE:
225 <221> NAME/KEY: misc_feature
226 <222> LOCATION: (34)..(35)
227 <223> OTHER INFORMATION: n is a, c, g, or t
229 <400> SEQUENCE: 14
W--> 230 cccaaagccg cgcgagcagt gnnknnkgca nnknnkggca atcctgtccc          50
233 <210> SEQ ID NO: 15
234 <211> LENGTH: 26
235 <212> TYPE: DNA
236 <213> ORGANISM: Artificial Sequence
238 <220> FEATURE:
239 <223> OTHER INFORMATION: Antisense primer for randomisation of codons 131-135
241 <400> SEQUENCE: 15
242 tgctcgcgcg gctttggggt tgcctg          26
245 <210> SEQ ID NO: 16
246 <211> LENGTH: 41
247 <212> TYPE: DNA
248 <213> ORGANISM: Artificial Sequence
250 <220> FEATURE:
251 <223> OTHER INFORMATION: Sense primer for randomisation of codons 115-116
254 <220> FEATURE:
255 <221> NAME/KEY: misc_feature
256 <222> LOCATION: (19)..(20)
257 <223> OTHER INFORMATION: n is a, c, g, or t
259 <220> FEATURE:
260 <221> NAME/KEY: misc_feature
261 <222> LOCATION: (22)..(23)
262 <223> OTHER INFORMATION: n is a, c, g, or t
264 <400> SEQUENCE: 16
W--> 265 ggagaagtga tttcttacnn bnnbttagca gccctggcag g          41
268 <210> SEQ ID NO: 17
269 <211> LENGTH: 27
270 <212> TYPE: DNA
271 <213> ORGANISM: Artificial Sequence
273 <220> FEATURE:
274 <223> OTHER INFORMATION: Antisense primer for randomisation of codons 115-116
276 <400> SEQUENCE: 17
277 gtaagaaatc acttctccga atttcac          27
280 <210> SEQ ID NO: 18
281 <211> LENGTH: 41
282 <212> TYPE: DNA
283 <213> ORGANISM: Artificial Sequence
285 <220> FEATURE:

```

RAW SEQUENCE LISTING

DATE: 09/12/2006

PATENT APPLICATION: US/10/591,159

TIME: 11:29:32

Input Set : A:\2006-1322A - Sequence Listing.txt

Output Set: N:\CRF4\09122006\J591159.raw

```

286 <223> OTHER INFORMATION: Sense primer for randomisation of codons 150-152
289 <220> FEATURE:
290 <221> NAME/KEY: misc_feature
291 <222> LOCATION: (19)..(20)
292 <223> OTHER INFORMATION: n is a, c, g, or t
294 <220> FEATURE:
295 <221> NAME/KEY: misc_feature
296 <222> LOCATION: (22)..(23)
297 <223> OTHER INFORMATION: n is a, c, g, or t
299 <220> FEATURE:
300 <221> NAME/KEY: misc_feature
301 <222> LOCATION: (25)..(26)
302 <223> OTHER INFORMATION: n is a, c, g, or t
304 <400> SEQUENCE: 18
W--> 305 ccgtgccaca gagtggtcnn bnnbnnbgbga gccgtgggcg g 41
308 <210> SEQ ID NO: 19
309 <211> LENGTH: 18
310 <212> TYPE: DNA
311 <213> ORGANISM: Artificial Sequence
313 <220> FEATURE:
314 <223> OTHER INFORMATION: Antisense primer for randomisation of codons 150-152
316 <400> SEQUENCE: 19
317 gaccactctg tggcacgg 18
320 <210> SEQ ID NO: 20
321 <211> LENGTH: 35
322 <212> TYPE: DNA
323 <213> ORGANISM: Artificial Sequence
325 <220> FEATURE:
326 <223> OTHER INFORMATION: Sense primer for mutating G131K, G132T, M134L, R135S
328 <400> SEQUENCE: 20
329 gcagccacgg cagcagtgaa gacggcactg agtgg 35
332 <210> SEQ ID NO: 21
333 <211> LENGTH: 40
334 <212> TYPE: DNA
335 <213> ORGANISM: Artificial Sequence
337 <220> FEATURE:
338 <223> OTHER INFORMATION: Antisense primer for mutating G131K, G132T, M134L, R135S
340 <400> SEQUENCE: 21
341 ggatagggac aggattgccca ctcaagtgccg tcttcactgc 40
344 <210> SEQ ID NO: 22
345 <211> LENGTH: 41
346 <212> TYPE: DNA
347 <213> ORGANISM: Artificial Sequence
349 <220> FEATURE:
350 <223> OTHER INFORMATION: Sense primer for mutating Q115S, Q116H
352 <400> SEQUENCE: 22
353 gtgaaattcg gagaagtgat ttcttactct cacttagcag c 41
356 <210> SEQ ID NO: 23
357 <211> LENGTH: 35

```

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/591,159

DATE: 09/12/2006
TIME: 11:29:34

Input Set : A:\2006-1322A - Sequence Listing.txt
Output Set: N:\CRF4\09122006\J591159.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:2; N Pos. 14
Seq#:14; N Pos. 22, 23, 25, 26, 31, 32, 34, 35
Seq#:16; N Pos. 19, 20, 22, 23
Seq#:18; N Pos. 19, 20, 22, 23, 25, 26
Seq#:41; N Pos. 1
Seq#:45; N Pos. 18, 19, 21, 22, 24, 25, 27, 28, 30, 31
Seq#:46; N Pos. 18, 19, 21, 22, 24, 25, 27, 28, 30, 31
Seq#:47; N Pos. 17, 18, 20, 21, 23, 24, 26, 27, 29, 30
Seq#:48; N Pos. 19, 20, 22, 23, 25, 26, 28, 29, 31, 32

VERIFICATION SUMMARY

DATE: 09/12/2006

PATENT APPLICATION: US/10/591,159

TIME: 11:29:34

Input Set : A:\2006-1322A - Sequence Listing.txt

Output Set: N:\CRF4\09122006\J591159.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application No

L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:64 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0

L:230 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0

L:265 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0

L:305 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0

L:592 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:0

L:666 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45 after pos.:0

L:704 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46 after pos.:0

L:742 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:47 after pos.:0

L:780 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:0